

# TEAMS Meeting Protocols:



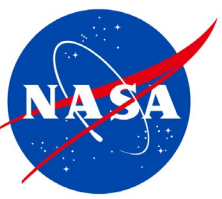
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 Medical and Environmental Services Division

- ◆ Please ensure your mic is muted
- ◆ To optimize performance, please only turn on your camera if being introduced or presenting.
- ◆ Presenting: The presentation will be controlled by the moderator.
  - Presenters will say “Next slide please” when ready for the next slide
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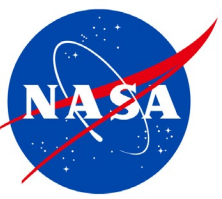
Medical and Environmental Services Division

# Kennedy Space Center Environmental Services and Master Planning Overview

2022

*“Enabling environmentally  
sound mission success”*





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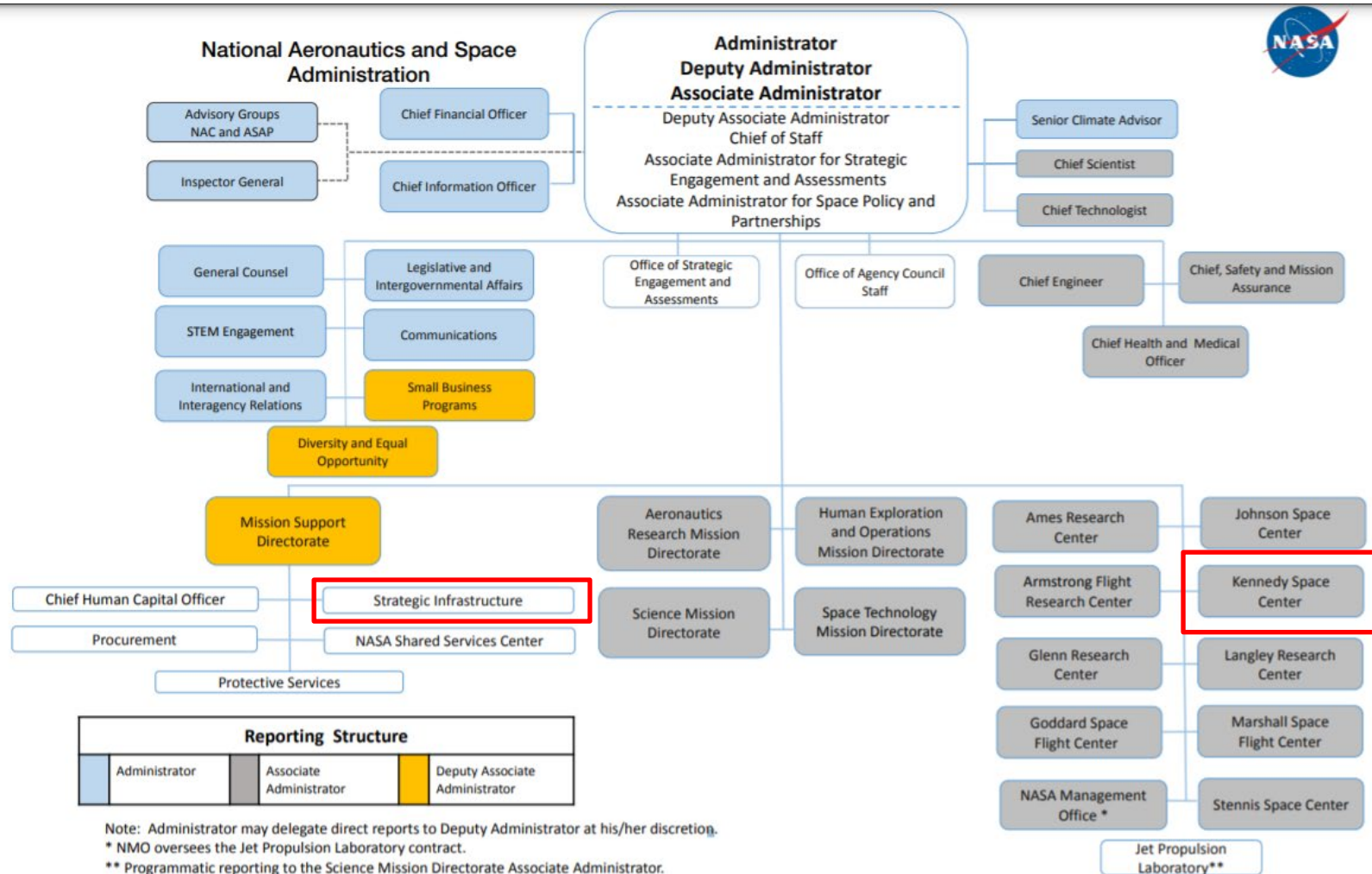
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 Medical and Environmental Services Division

- ◆ Organizational Structure
- ◆ Policy and Guidance Documents
- ◆ Environmental Assurance Branch Overview
- ◆ Environmental Management Branch Overview
- ◆ National Environmental Policy Act (NEPA) Overview & Environmental Review of Proposed Actions
- ◆ Master Planning
- ◆ Questions/Discussion



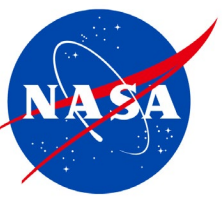
# NASA



www.nasa.gov

February 2021

◆ [https://www.nasa.gov/sites/default/files/atoms/files/nasa\\_organizational\\_chart\\_feb\\_2021.pdf](https://www.nasa.gov/sites/default/files/atoms/files/nasa_organizational_chart_feb_2021.pdf)



# Kennedy Space Center



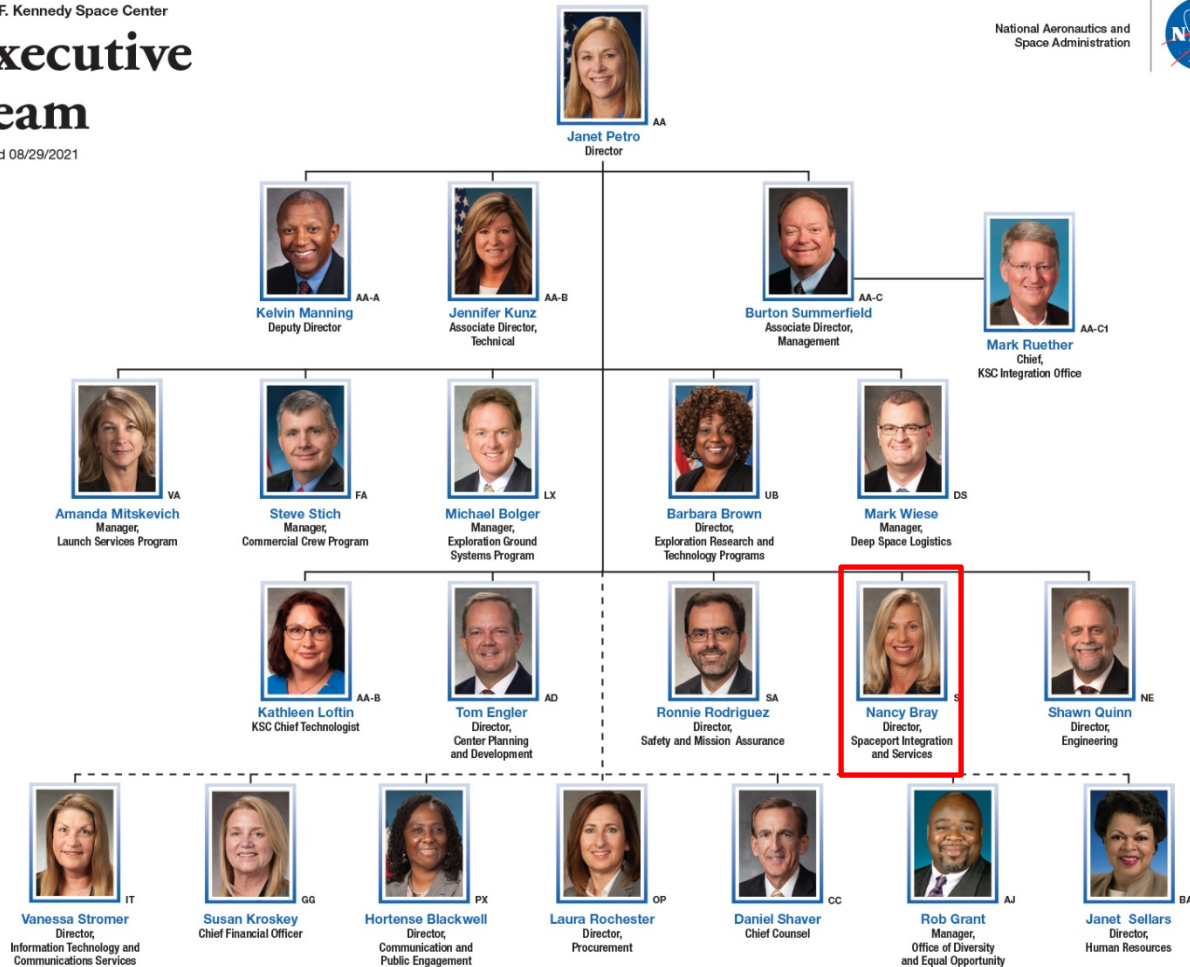
Kennedy Space Center Medical and Environmental Services Division

John F. Kennedy Space Center

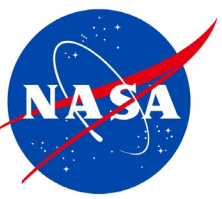
## Executive Team

Revised 08/29/2021

National Aeronautics and  
Space Administration



◆ [https://www.nasa.gov/centers/kennedy/about/information/ksc\\_org\\_chart.html](https://www.nasa.gov/centers/kennedy/about/information/ksc_org_chart.html)

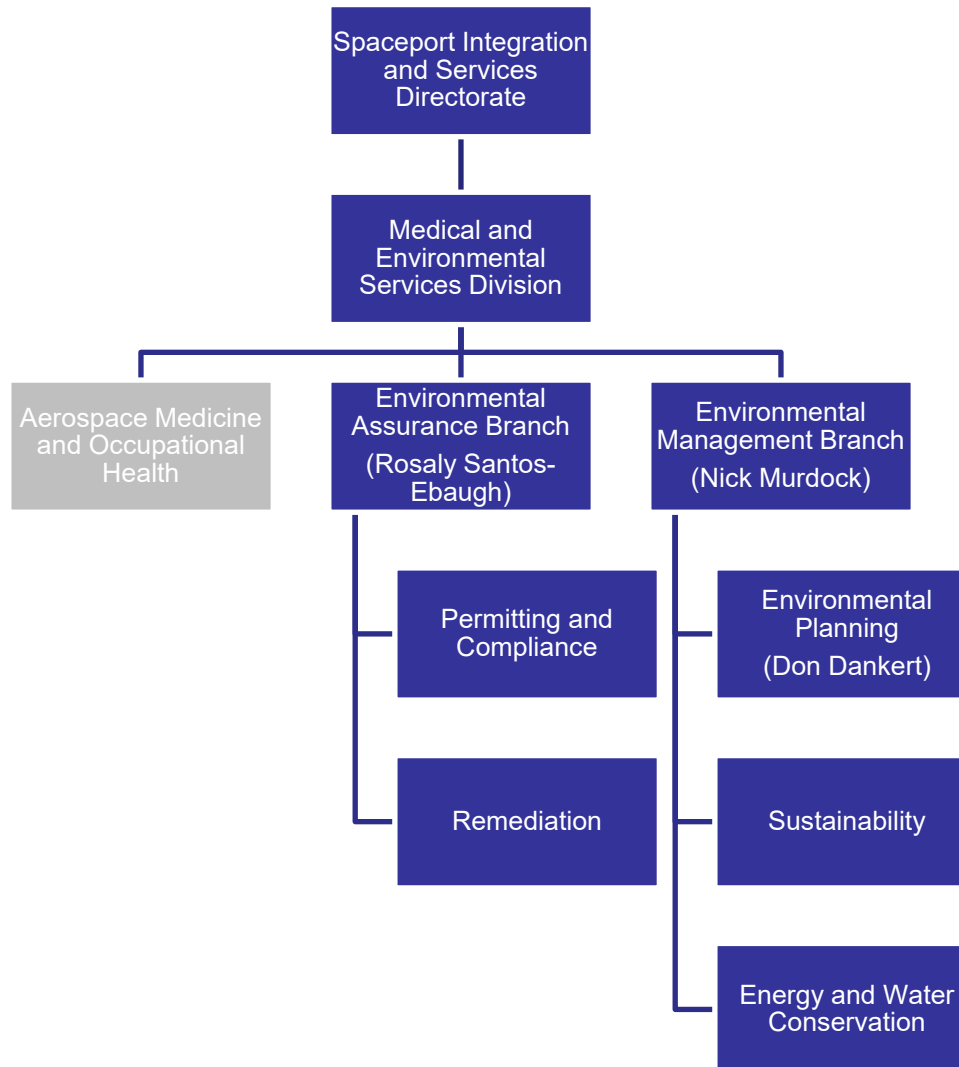


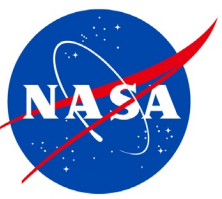
# Environmental Services



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# Policy and Guidance Documents

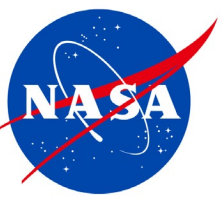


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- ◆ [NASA Policy Directive \(NPD\) 8500.1, NASA Environmental Management](#)
  - It is NASA's policy to:
    - (1) Comply with all applicable requirements of Federal statutes, regulations, and Executive Orders (EO); state, local, or territorial environmental laws and regulations; and NASA's requirements and agreements with other agencies, industry, and organizations.
- ◆ [NASA Procedural Requirements \(NPR\) 8553.1, NASA Environmental Management System](#)
  - The purpose of this National Aeronautics and Space Administration (NASA) Procedural Requirement (NPR) is to provide the structure for an overall Agency approach to managing environmental activities that allows for an efficient, prioritized system execution.
- ◆ [Kennedy NASA Policy Directive \(KNPD\) 8500.1, KSC Environmental Management](#)
- ◆ [Kennedy NASA Procedural Requirements \(KNPR\) 8500.1, Kennedy Space Center Environmental Requirements](#)





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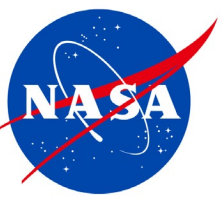
Medical and Environmental Services Division

# Environmental Assurance Branch (EAB) Overview



Rosaly Santos-Ebaugh



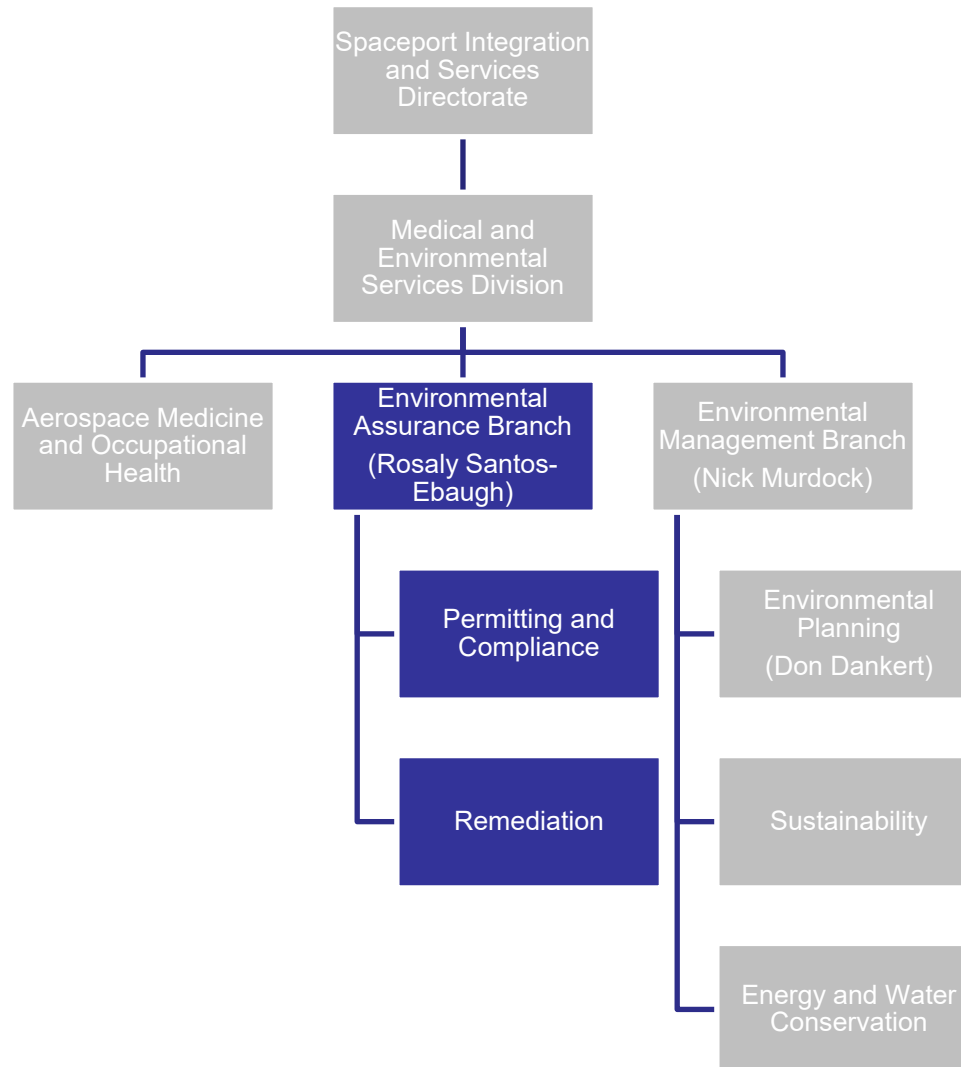


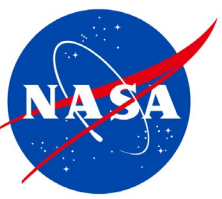
# Environmental Services



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# Overview



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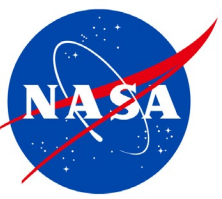
Medical and Environmental Services Division

## ◆ Permitting and Compliance

- Ensure that NASA operations, projects, and activities are in full compliance with environmental regulations
  - Identify and communicate environmental permitting and compliance requirements
  - Assist KSC organizations and contractors in getting necessary environmental permits for projects and operations
  - Sign and process environmental permit applications, renewals, and modifications
  - Inspect KSC organizations, contractors, and tenants

## ◆ Remediation Group

- The Remediation Program conducts site assessments which identifies the extent of the impact and defines how to cleanup impacted areas where chemical releases may have occurred.
- Sites are managed in accordance with the Resource Conservation and Recovery Act under a Hazardous Waste Permit issued by the Florida Department of Environmental Protection (FDEP).



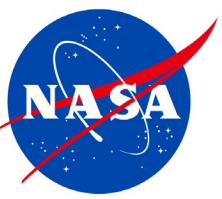
# Permitting & Compliance Activities



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- ◆ Regulated Waste Management
  - Hazardous, Controlled, Energetic/Ordnance, Toxics, & Biomedical
- ◆ Air Emissions Compliance & Permitting
- ◆ Stormwater Compliance & Permitting
- ◆ Drinking Water
- ◆ Construction Dewatering Permitting
- ◆ Industrial Wastewater Treatment & Permitting
- ◆ Domestic Wastewater & Septic Systems
- ◆ Landfill Compliance & Permitting
- ◆ Registered Petroleum Storage Tanks
- ◆ Oil Spill Prevention, Control, and Countermeasures (SPCC)
- ◆ Pesticide Management



# Regulatory Agencies

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- ◆ NASA KSC EAB and EMB work with these regulatory agencies
- ◆ NASA KSC complies with the same regulations as private industry and local government

Florida Department of Environmental Protection (FDEP)

- Hazardous Waste
- Solid Waste Disposal & Landfills
- Air Emissions
- Drinking Water
- Domestic Wastewater
- Industrial Wastewater
- Stormwater Management
- Underground Injection Wells

Brevard County Natural Resources Management Department

- Regulated Petroleum Storage Tanks

St. Johns River Water Management District (SJRWMD)

- Stormwater Management
- Wetlands Protection
- Dredge and Fill
- Consumptive Use
  - ✓ Potable Water Usage
  - ✓ Surface Water & Groundwater Withdrawal
  - ✓ Construction Dewatering

U.S. Fish and Wildlife Service

- Endangered Species
- Wildlife Management
- Land Management
- Prescribed Burns

U.S. Environmental Protection Agency (EPA) Region IV

- Polychlorinated Biphenyls (PCBs)
- Spill Prevention, Control, & Countermeasures (SPCC)

United States Army Corps of Engineers

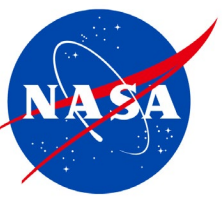
- Environmental Resource Permits

Florida Department of Agriculture and Consumer Services

- Pesticides

Florida Department of Health

- Septic Systems
- Limited Use Wells



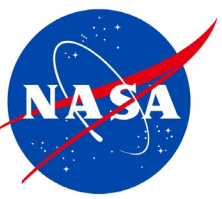
# EAB Public Interfaces



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- ◆ Environmental Services Website;  
<https://environmental.ksc.nasa.gov/>
- ◆ Permit Public Notifications
- ◆ Florida Department of Environmental Protection Electronic Document Management System (OCULUS); [Login \(state.fl.us\)](https://login.state.fl.us)
- ◆ NASA Scientific and Technical Information (STI) Repository (NTRS) STI; <https://www.sti.nasa.gov/>
- ◆ St. Johns River Water Management District, [ePermit \(sjrwmd.com\)](https://www.sjrwmd.com)
- ◆ Florida Department of Environmental Protection Basin Management Action Plans (BMAPs) Membership; [Basin Management Action Plans \(BMAPs\) | Florida Department of Environmental Protection](https://www.dep.state.fl.us/bmap/)
- ◆ [NASA Freedom of Information Act \(FOIA\)](https://www.nasa.gov/foia/)



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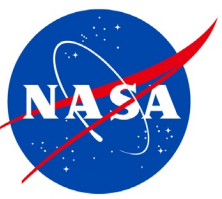
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 Medical and Environmental Services Division

# Environmental Management Branch (EMB) Overview



Nick Murdock

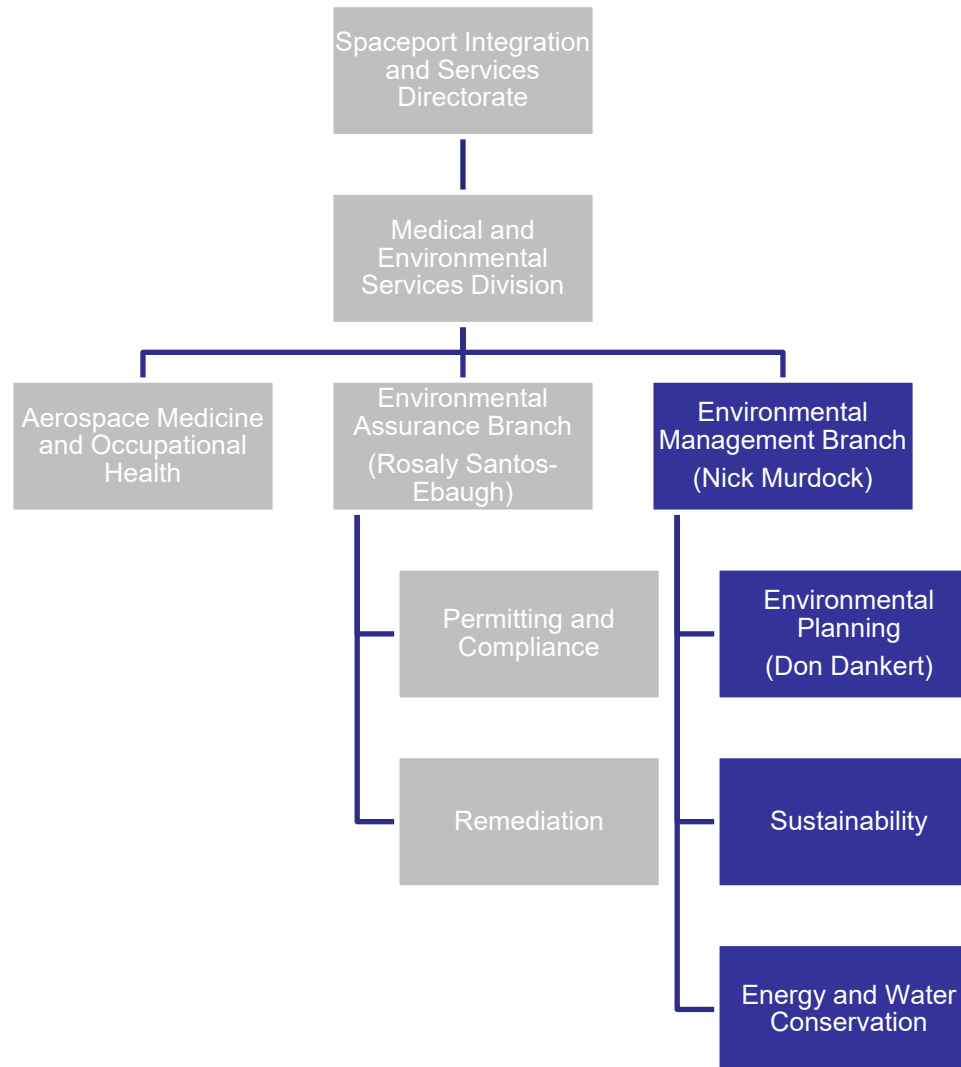


# Environmental Services

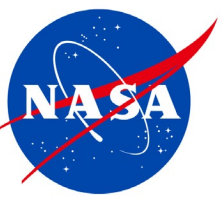


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Medical and Environmental Services Division







# Overview



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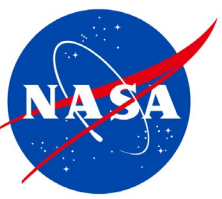
**Medical and Environmental Services Division**

## ◆ Environmental Planning Team

- Ecological Monitoring
- National Environmental Policy Act (NEPA) compliance and documentation
- Cultural Resources Management and Historical Preservation
- Kennedy Environmental Resources Document (ERD)
- Threatened and Endangered Species consultation and coordination
- Wetlands and Scrub Restoration
- Kennedy Sea Turtle Lighting Guidelines
- Gopher Tortoise Management

## ◆ Sustainability and Energy and Water Conservation Teams

- KSC Sustainable Environmental Management System (SEMS)
- Energy and Water Program Management
- Sustainable acquisition (green purchasing)
- Pollution prevention
- Recycling program
- Environmental and sustainability outreach
- Environmental awards



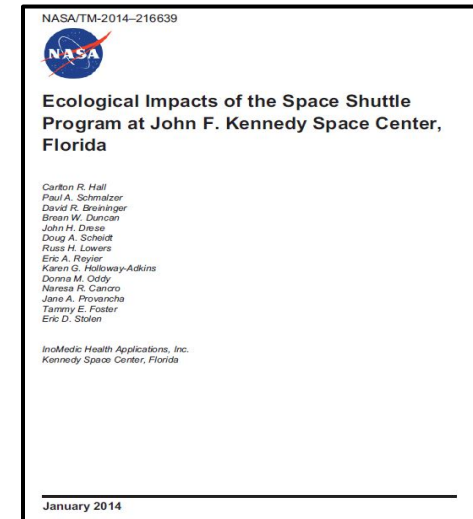
# Ecological Monitoring Program

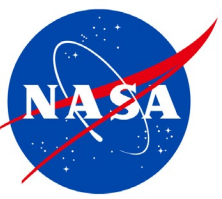


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- ◆ Ecological Monitoring Program established in compliance with NEPA, ESA and KSC Environmental Impact Statement (EIS) for Shuttle Era requirements.
  - Purpose is to assess health of the local environment and monitor protected wildlife species.
  - Data gathered is used to make informed land management decisions and assist in permitting and compliance needs of the Center.
- ◆ Environmental Planning oversees the Ecological Monitoring Program and supports Merritt Island National Wildlife Refuge (MINWR) and Canaveral National Seashore (CNS) in land management and endangered species protection decisions.





# Ecological Monitoring Program

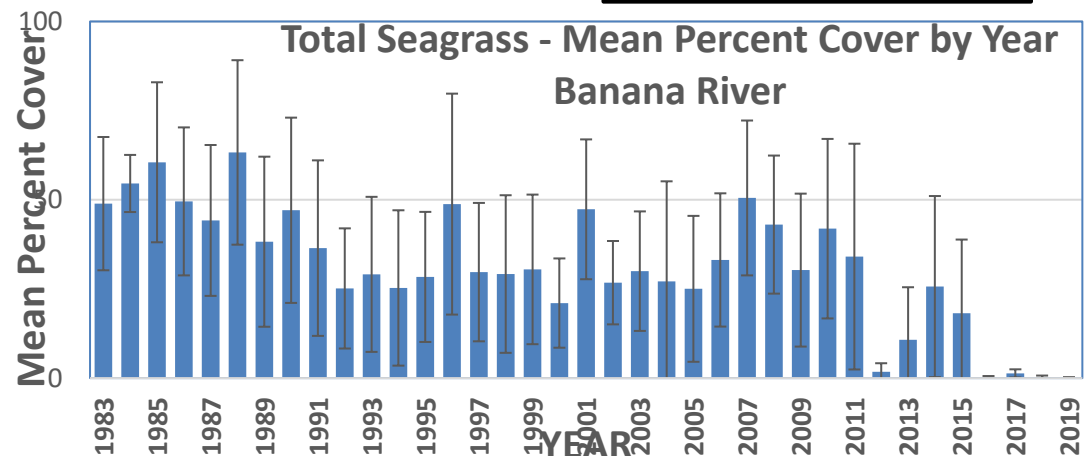


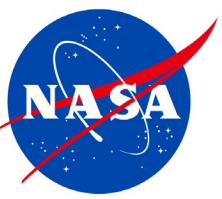
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## ◆ History of Monitoring:

- Alligator
- Bald Eagle
- Beach Mice
- Fisheries
- Florida Scrub-Jay
- Sea Turtle Lighting
- Wading Birds
- Indian River Lagoon Shoreline
- Water Quality
- Seagrass
- Scrub Vegetation
- Carbon Sequestration
- Fire Effects
- Hydrology
- Launch Impacts
- Dune





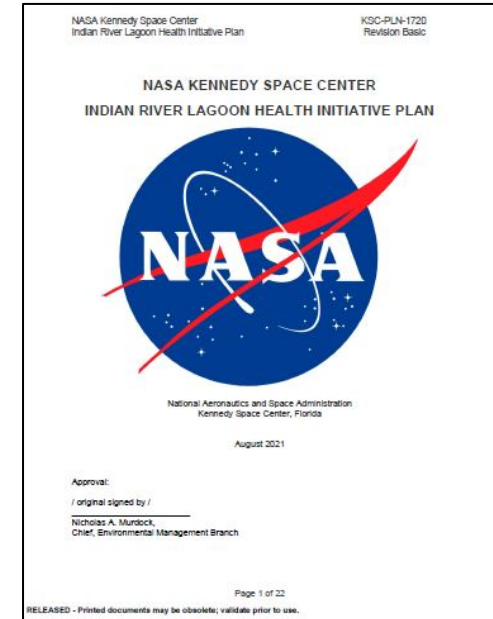
# Indian River Lagoon Health Plan



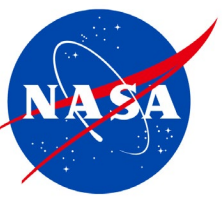
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- ◆ The document provides NASA KSC and its partners a plan which considers the unique relationship between the approximately 140,000-acre Federal property and the IRL estuary on and adjacent to KSC. The Plan:
  - Proposes actionable projects that guide NASA KSC's continued role as a responsible steward promoting IRL health and biodiversity.
  - The plan provides NASA KSC a reference document to enable informed decisions regarding future IRL health projects as funding becomes available.
- ◆ Plan actions are grouped according to monitoring, restoration and collaborative activities.
  - Includes 32 proposed actions.
  - Approximately half of those actions are funded (primarily monitoring).
  - Restoration actions need funding.
  - NASA working on collaborative actions.



Schooling Black Drum. Photo Credit: Virginia Barker, BCNRM



# EMB Public Interfaces

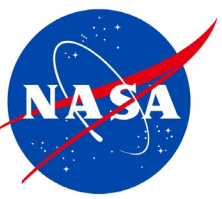


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- ◆ Environmental Services Website;  
<https://environmental.ksc.nasa.gov/>
- ◆ Kennedy Space Center Website;  
<https://www.nasa.gov/centers/kennedy/about/sustainability>
- ◆ National Environmental Policy Act (NEPA) Public Participation and Project Specific Website(s)
  - [https://www.nasa.gov/green/nepa/itm\\_NEPAProgram.html](https://www.nasa.gov/green/nepa/itm_NEPAProgram.html)
  - <https://www.nasa.gov/emd/nepa-public-reviews>
- ◆ NASA Scientific and Technical Information (STI) Repository (NTRS) STI; <https://www.sti.nasa.gov/>
- ◆ [Indian River Lagoon National Estuary Program](#) Management Board and STEM Advisory Committee Membership
- ◆ [NASA Freedom of Information Act \(FOIA\)](#)



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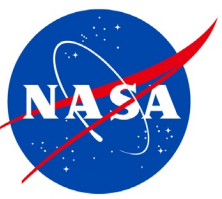
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Medical and Environmental Services Division

# National Environmental Policy Act (NEPA) Overview & Environmental Review of Proposed Actions



Don Dankert



# National Environmental Policy Act (NEPA)

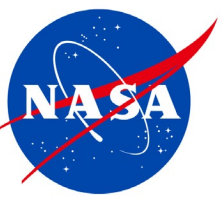


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- ◆ NEPA requires Federal Agencies to:
  - Consider, BEFORE any action is taken, environmental, technical and economic factors.
  - Consider alternatives to their proposed actions.
  - Provide environmental impact information to decision-makers.
  - Involve the public in implementing their NEPA procedures.
- ◆ NEPA does not require proposed actions or projects to:
  - Be free of environmental impacts.
- ◆ NEPA requires the decision-maker to consider environmental impacts in the design and implementation of a proposed action or project.





# NEPA Documentation



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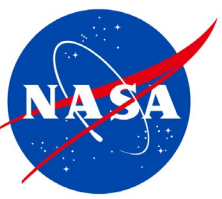
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## ◆ Three primary NEPA documents:

- Categorical Exclusion (CatEx)
  - Documents proposed actions or activities that the agency has designated as normally having no significant impacts
- Environmental Assessment (EA)
  - Documents proposed actions or activities that may have a significant impact on the human environment, but it is unclear.
- Environmental Impact Statement (EIS)
  - Documents proposed actions or activities expected to have a significant impact on the quality of the human environment.

## ◆ NEPA compliance and documentation starts with submittal of the KSC Environmental Checklist (EC)

- The EC aids in early identification of environmental issues and requirements associated with proposed work and activities.



# Environmental Review Process



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 Medical and Environmental Services Division

- ◆ Center Planning Review
- ◆ KNPR 8500.1, Kennedy Space Center Environmental Requirements NEPA Review:
  - Project proponent submits the EC to EMB.
  - EMB issues a Record of Environmental Consideration (REC) that lists all of the project's known environmental requirements. If not a CatEx, an EA or EIS is required.
- ◆ Site Plan Review
- ◆ Environmental Resource Permitting
  - Stormwater treatment (additional 50% treatment volume)
  - Compensatory Mitigation
- ◆ Environmental Points of Contact
- ◆ EAB Compliance



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# MASTER PLAN OVERVIEW



<https://masterplan.ksc.nasa.gov/>

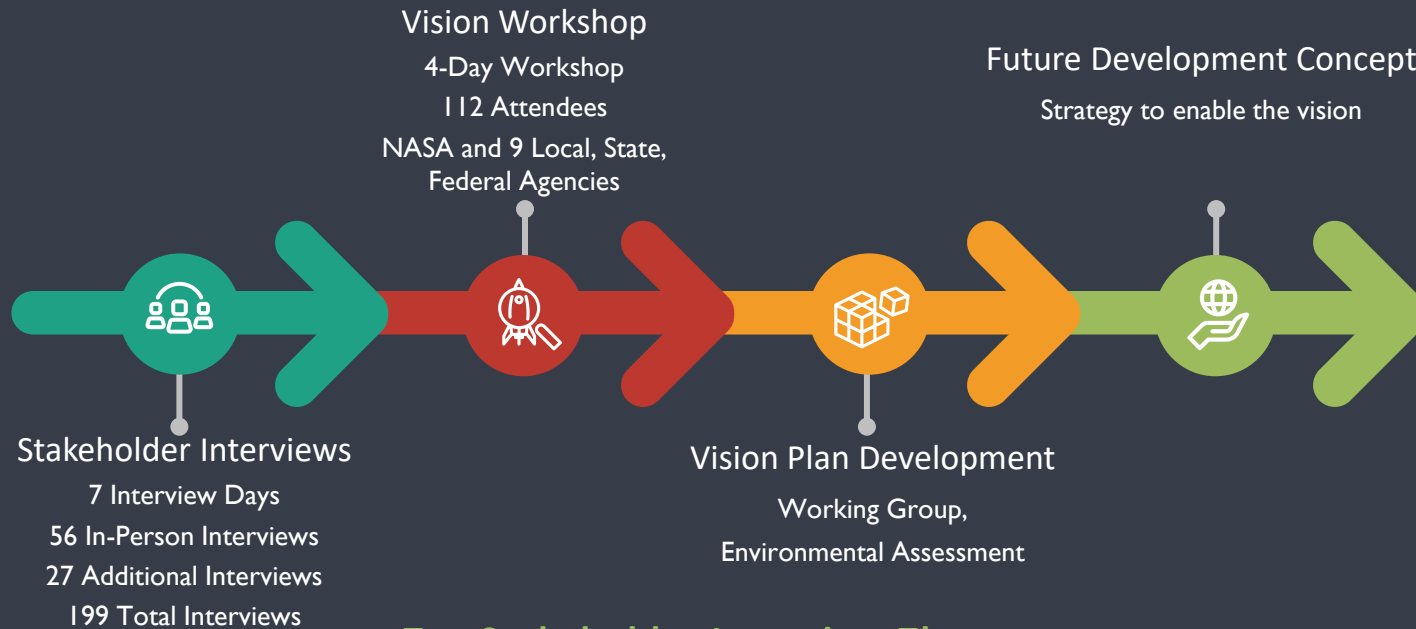
David Thorpe

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Reference EDR Log #: 10474 NASA  
KSC Export Control Office, (321) 867-9209

# VISION PLAN PROCESS



## Top Stakeholder Interview Themes

### Strengths

1. Location & Land Availability
2. Workforce
3. Amenities
4. Infrastructure Network
5. Partnerships

### Weaknesses

1. Aging Infrastructure
2. Changes in Agency Direction
3. Environmental Constraints
4. Campus Sprawl
5. Budget Constraints

### Opportunities

1. Partnerships
2. Campus Consolidation
3. Future Missions
4. Development of Launch Pads
5. Sustainability

### Threats

1. Climate/Environmental
2. Workforce Retention
3. Funding/Budget
4. Politics & Policy
5. Reduction Consequences

# PLANNING GOALS



## Goal 1

FLEXIBLE PROCESSING &  
LAUNCH CAPABILITIES

CORE COMPETENCY II, III, IV, V, VI



## Goal 2

ROBUST  
INFRASTRUCTURE

CORE COMPETENCY III, IV, V, VI



## Goal 3

SUSTAINABLE FACILITIES

CORE COMPETENCY I, II, III, IV, V, VI



## Goal 4

RESPONSIBLE STEWARDSHIP  
OF NASA'S ASSETS

CORE COMPETENCY III, IV, V



OUR PLANNING VISION IS TO ENHANCE  
THE MULTI-USER SPACEPORT WITH  
**FLEXIBLE PROCESSING AND LAUNCH  
CAPABILITIES, ROBUST  
INFRASTRUCTURE, SUSTAINABLE  
FACILITIES, AND RESPONSIBLE  
STEWARDSHIP OF NASA'S ASSETS TO  
ENSURE NASA'S MISSIONS NOW AND IN  
THE FUTURE**

# FUTURE DEVELOPMENT STRATEGIES



## Goal 1

### FLEXIBLE PROCESSING & LAUNCH CAPABILITIES

- Promote development that contributes to the expansion of the end-to-end processing and technical expertise services to support NASA mission success now and in the future
- Support development that will expand launch capabilities to increase the diversity of launch vehicles to provide increased cost-effective options for NASA missions

## Goal 4

### RESPONSIBLE STEWARDSHIP OF NASA ASSETS

- Target development away from environmentally sensitive and vulnerable areas
- Minimize development that impacts wetlands to NASA mission critical
- Ensure the preservation of critical infrastructure to ensure KSC continues to meet mission needs well into the future



## Goal 2

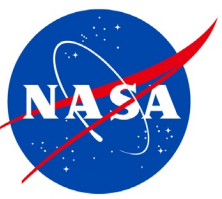
### ROBUST INFRASTRUCTURE

- Modernize infrastructure to support the maximum launch cadence and increased cost savings to NASA missions through competition and economies of scale
- Develop infrastructure that would alleviate launch and processing bottle-necks while minimizing risk to operations

## Goal 3

### SUSTAINABLE FACILITIES

- Maximize the benefit to NASA of partnerships and divestment of obsolete facilities to target O&M savings of at least 40% from a 2011 baseline
- Decrease risk to personnel and property and consolidate NASA's non-hazardous operations away from hazards



# Questions/ Discussion

Helping to Green the planet – we're on it!

